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ABSTRACT

The ultimate goal of graduate education is to design programs of preparation to promote improvement in the quality of education and training services that are provided in a variety of different contexts. In the 1960s, Nova University developed field-based doctoral programs as a strategy to prepare individuals to become agents of change in the contexts in which they work. Nova's Center for Higher Education developed field-based doctoral programs in: (1) higher education; (2) leadership in adult education; and (3) vocational, technical, and occupational (VTO) education. During the 1980s, the Center for Higher Education critically analyzed its format for the delivery of the specialization seminars for the three programs. This paper describes the redesign and implementation of the new format for developing change agents in VTO education, detailing the content of two specialization seminars, namely, "Personnel--Human Resources Development" and "The Emergence of Vocational, Technical, and Occupational Education in America," and analyzing outcomes of the new seminar format. (Author/EJV)

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PREPARING AGENTS OF CHANGE IN
VOCATIONAL, TECHNICAL, AND OCCUPATIONAL EDUCATION

by

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Abstract

The ultimate goal of graduate education is to design programs of preparation to promote improvement in the quality of education and training services that are provided in a variety of different contexts. In the 1960s, Nova University developed the field-based doctoral program as a strategy to prepare individuals to become agents of change in the contexts in which they work. The Center for Higher Education developed field-based doctoral programs in (1) higher education; (2) leadership in adult education; and (3) vocational, technical, and occupational education. During the 1980s, the Center for Higher Education critically analyzed the format for the delivery of the specialization seminars for the three above-named programs. This paper describes the redesign and implementation of the new format for developing change agents in vocational, technical and occupational education.

The biggest "infrastructure" challenge for this country in the next decade is not the billions needed for railroads, highways and energy. It is the American school system, from kindergarten through Ph.D. program and the post-graduate education of adults. And it requires something far scarcer than money - thinking and risk-taking.

Peter F. Drucker, "The Coming Changes In Our School Systems," The Wall Street Journal, March 3, 1981.

* * * * *

I. The Emergence of Nontraditional Graduate Education Programs

The ultimate goal of graduate education is to design programs of preparation to promote improvement in the quality of education and training services that are provided in a variety of different contexts. In order to achieve that goal, higher education institutions engage in research about the preparation of professional educators and translate that research into graduate programs to assist persons to attain a high level of proficiency in order to provide statesman-like leadership to institutions of society.¹ Some institutions also provide post-doctoral continuing education programs to assist persons to maintain and improve upon essential leadership skills.²

When the Sputniks were launched in 1957, many sectors of the education and training industry began to examine their mission and role. Several traditional institutions began to review their programs, including content formats, delivery system formats, and formats for evaluating student competencies. The criticisms about education, particularly at the undergraduate and graduate levels, also gave birth to a number of non-traditional programs. It was in this context that Nova University was founded in 1964.

Since its beginning, Nova University designed and implemented innovative approaches which provide nontraditional choices for a broad range of students. In 1971, the university developed its first field-based program for practicing elementary- and secondary-level school administrators. This National Ed.D. Program for Educational Leaders is currently being offered to candidates in 17 states through the Center for School Leadership Development.

In 1972, the university developed the Ed.D. program for community college personnel. This program led to the development of the Center for Higher Education which will be described briefly in the next section.

In 1974, the university developed the Ed.D. program in early and middle childhood. This program is offered through the Center for the Advancement of Education which is dedicated to assisting teachers, counselors, trainers, administrators, and other persons working in education and health and human service professions.

II. The Center for Higher Education

The Center for Higher Education provides a field-based Doctor of Education (Ed.D.) program for practitioners working in three specialized areas: (1) higher education; (2) leadership in adult education; and (3) vocational, technical, and occupational education. Many students enrolled in these programs are employed in postsecondary education, business and industry, the health care delivery system, and military training. The center uses a field-based delivery format in combining formal instruction, independent study, and applied research.

Students are required to complete seven seminars, five practicums, and a major applied research project (MARF). Five of the seven seminars are core seminars that are required for all students regardless of specialization. The core seminars are: (1) Curriculum and Program Planning, (2) Governance and Management, (3) Applied Educational Research and Evaluation, (4) Learning Theory and Applications, and (5) Societal Factors Affecting Education. Two are specialization seminars that are taken only by those students who have chosen that specialization. The specialization seminars are as follows:

Higher Education.

1. The Politics, Law, and Economics of Higher Education.
2. The Emergence of Higher Education in America.

Leadership in Adult Education

1. History, Philosophy, and Nature of Adult Education.
2. The Theory and Practice of Adult Education Methodology.

Vocational, Technical, and Occupational Education

1. Personnel - Human Resources Development.
2. The Emergence of Vocational, Technical, and Occupational Education in America.

Practicums are applied research projects that are designed to promote the solution to current problems in the establishment in which the student works. Practicums are highly structured opportunities to put theory into practice and to submit newly acquired knowledge and skills to the reality of the workplace. Students must successfully complete five practicums, one of which must be in a specialization seminar.

MARP's are much like practicums, only much more ambitious and rigorous. The MARP is the capstone to doctoral study.

The integrated program of study is designed so that it can be completed in approximately three years. Normally, students attend one seminar per quarter. Sessions are scheduled on Saturdays, about a month apart. Three sessions are held for each seminar. Practicums are undertaken after the completion of the seminar. The MARP is undertaken after the completion of seminars and practicums.

Students are organized into groups called clusters. Clusters provide the vehicle through which instruction and other services are provided to students. Cluster coordinators, professional educators who serve as local representatives of Nova University, manage all activities and services at the local level. During the first two nine-month academic years, formal instruction is offered by national lectures during three three-month terms. National lecturers travel to the cluster sites for seminar meetings. The specialization seminars are delivered in a new format which is described in the section which follows.

III. The New Delivery System Format

Discussion about alternative ways to deliver the specialization seminars occurred throughout the early 1980s. These discussions became more focused in the spring of 1983. During the summer of 1983, a commitment was made to convene a meeting of national lecturers (1) to develop the conceptual framework for the new delivery system format, (2) to identify the components

that would be included in the new delivery system, (3) to discuss alternative ways to design the various components, and (4) to establish the time-line for implementing the new delivery system.

These discussions included a review of research about adult learning and components that would be a part of the new delivery system format. Ultimately the national lecturers decided the new system should include the following components: (a) a learning contract, (b) required units, (c) elective units, (d) participation in the Summer Institute, and (e) a synthesis paper.

Specialization seminar materials were developed or modified during the fall of 1984, and winter of 1984. These materials were distributed to students in March 1984. Specialization seminars offered through this new format in 1984 were as follows:

- Higher Education - The Politics, Law, and Economics of Higher Education
 - The Emergence of Higher Education In America
- Adult Education - History, Philosophy, and Nature of Adult Education
- VTO Education - Personnel - Human Resources Development

Specialization seminars offered through this new format in 1985 were as follows:

- Higher Education - The Politics, Law, and Economics of Higher Education
 - The Emergence of Higher Education In America
- Adult Education - Theory and Practice of Adult Education Methodology
- VTO Education - The Emergence of VTO Education In America

IV. The Vocational, Technical, and Occupational Education Program

The program in vocational, technical, and occupational education consists of the five core seminars and two specialization seminars: (1) Personnel - Human Resources Development and (2) The Emergence of Vocational, Technical, and Occupational Education In America.

A. Personnel - Human Resources Development (P-HRD)

Because humans are the most important resource any establishment has, it was decided to modify P-HRD first to the new format. During the fall of 1983, national lecturers made modifications to study guides and developed other materials to run the first series of specialization seminars in 1984. In the case of P-HRD the following materials were developed: (1) Overview, (2) Study Guide, and (3) Synthesis Paper Guide. The Study Guide contained the following units:

1. The Changing Nature of Society
2. Stages of Human Development
3. Linking HRD to Organizational Development
4. HRD in the Technical Society Based on Information
5. Use of Resources in the Personnel Function
6. Organization and Administration of the HRD Function
7. Legal Aspects of the HRD Function
8. Student Personnel Function
9. Leadership in Human Resources Development

These materials were distributed to students in March 1984.

Students were asked to read the Overview, Study Guide, and Synthesis Paper Guide. Students were then required to negotiate a learning contract for the three required and two elective units. Units 1, 2, and 3 were required in P-HRD. Unit 1 deals with the transition from an industrial society to a technical society based on the use of information and the implications for the HRD function. Unit 2 deals with stages of human growth and development and the implications for HRD. Unit 3 deals with stages of organizational development and the implications for HRD. The required and elective components were due as follows:

Unit 1	April 30, 1984
Unit 2	May 26, 1984
Unit 3	June 16, 1984
Elective 1	July 7, 1984
Elective 2	July 30, 1984

The Summer Institute began on Sunday, July 28, with students reporting on their required and elective units. During the week the students completed an analysis that pulled together the significant concepts and implications for each unit. Throughout the week individual counseling sessions were held between the national lecturer and students to discuss a broad range of program-related ideas. Students also completed an analysis of significant ideas learned from attending sessions at the Summer Institute. On Saturday, August 4, the group met to discuss the synthesis paper which was due on October 1, 1984.

B. The Emergence of Vocational, Technical, and Occupational Education
In America (E-VTO)

During the fall of 1984, the national lecturers conducted a formative evaluation of the implementation of the first year of the new delivery system. In addition, national lecturers made modifications to study guides and developed other materials to run a second series of specialization seminars in 1985. In the case of E-VTO, the following materials were developed (1) An Overview, (2) Study Guide, and (3) Synthesis Paper Guide. The Study Guide contained the following units:

1. Evolution of VTO Education In America.
2. Vocational Education In the Industrial Society.
3. Redesign of the Education System.
4. The Emergence of the Technical Society.
5. Economic Development and Revitalization.
6. Studies About Education.
7. Intellectual Capital Formation.

Videotapes were developed that provided the national lecturer an opportunity to explain the new delivery system format for each specialization seminar. The above-mentioned materials were distributed to students and the one-half hour tapes were circulated among clusters during March 1985.

Students were asked to view the tape and then read the Overview, Study Guide, and Synthesis Paper Guide. Students were then required to negotiate a learning contract with the national lecturer for the three required and two elective units. Units 3, 4, and 6 were required in E-VTO. Unit 3 deals with the redesign of the education system that resulted immediately after the launching of the Sputniks. Unit 4 deals with the transition from an industrial society to a technical society based on the exchange of ideas and

information. Unit 6 deals with the latest series of studies about education and the current wave of the redesign and restructuring of the education and training industry. The two elective assignments could be taken from any of the four remaining units or by writing a double paper for Unit 7. In addition, a student could obtain academic credits for prior learning experience by assembling a portfolio of material. The required and elective components were due as follows:

Unit 3	April 19, 1985
Unit 4	May 10, 1985
Unit 6	May 31, 1985
Elective 1	June 21, 1985
Elective 2	July 12, 1985

After completing the required and elective units, students were required to review their work and complete an analysis that pulled together the significant concepts and implications of each unit. Each student xeroxed multiple copies for distribution to the 15 participating students at their first meeting at the Summer Institute on Sunday afternoon.

The Summer Institute began on Sunday, August 4, with each student presenting their analysis of required and elective units. This process was continued on Monday, August 5, immediately after the opening session on "Outcomes" and the panel reaction to the opening session. As a way of emphasizing diversity and individualization, participants were asked to complete a learning styles inventory by Kolb, Rubin, and McIntyre³ and a hemisphericity instrument by Torrance, Reynolds, Riegel and Ball.⁴ The learning styles inventory provides scores for four preferences labeled (1) concrete experience, (2) reflective observation, (3) abstract

conceptualization, and (4) active experimentation. The hemisphericity instrument yields a score for the right hemisphere preference, the left hemisphere preference, and the integrated preference. Raw scores for the 15 participants are displayed in FIGURE 1. FIGURE 2 is a display of high, low, and mean scores for the group. Throughout the week individual counseling sessions were held between the national lecturer and students to discuss a broad range of program-related items including practicums and MARPs. Students also completed an analysis of significant ideas learned from attending sessions at the Summer Institute. On Saturday, August 10, the group met to discuss the synthesis paper which was due on October 1, 1985.

FIGURE 1
LEARNING STYLES AND HEMISPHERICITY SCORES

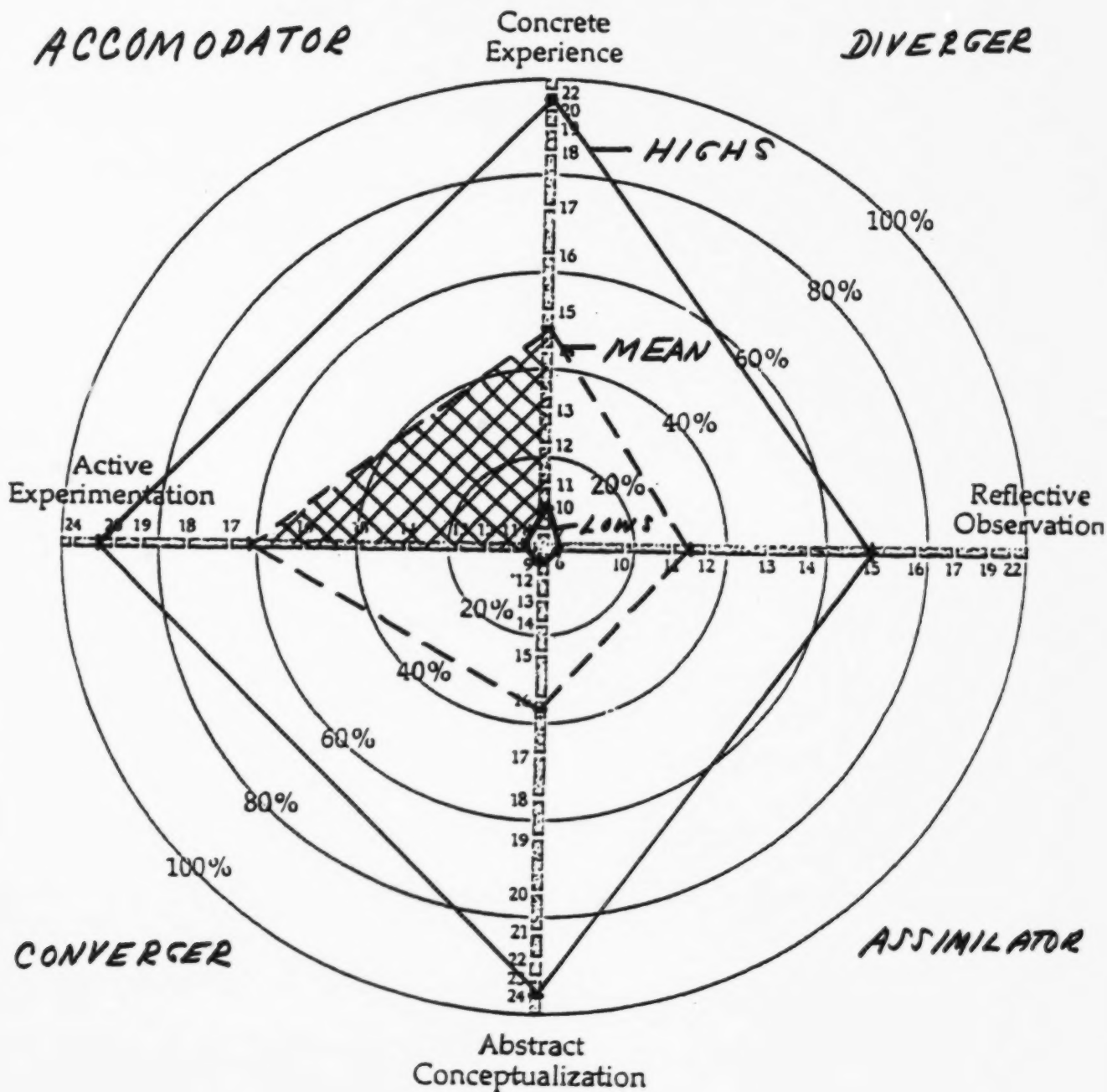
Participant	<u>CE</u>	<u>RO</u>	<u>AC</u>	<u>AE</u>	<u>R</u>	<u>L</u>	<u>I</u>
1	13	11	19	20	14	13	13
2	14	10	18	18	12	23	5
3	14	13	21	16	10	9	21
4	19	10	11	18	14	14	12
5	12	8	9	20	11	13	16
6	16	6	12	23	18	8	14
7	15	14	21	12	11	8	21
8	10	10	21	20	8	13	19
9	16	13	12	21	18	8	14
10	11	15	18	14	8	7	25
11	13	11	24	12	15	1	24
12	14	15	14	9	9	11	20
13	15	12	15	20	20	17	3
14	16	14	15	14	11	18	3
15	21	10	14	14	16	4	20
H	21	15	24	21	20	23	25
L	10	6	9	9	8	1	3
M	14.6	11.5	16.2	16.7	12.3	11.1	15.9

KEY:

- CE - Concrete Experience
- RO - Reflective Observation
- AC - Abstract Conceptualization
- AE - Active Experimentation
- R - Right Hemisphere
- L - Left Hemisphere
- I - Integrated

LEARNING STYLE PROFILE

Norms for the Learning Style Inventory



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OCCUPATIONAL EDUCATION IN AMERICA
SUMMER 1985

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V. Outcomes.

Learning is an additive process which combines concepts, ideas, and bits of factual information into a conceptual framework. Through systematic nurturing from a variety of experiences, a learner is able to modify existing conceptual frameworks or develop completely new ones. The seminar format was developed from research about adult learners that says that what they learn on their own initiative they learn more deeply and permanently than what they learn by being taught.

The specialization seminars begin by asking students to review a Study Guide to identify specific topics of study within a broad area. The seminars included a required component of three topics reflecting competencies that are absolutely essential to acquire and an elective component of two topics that are a reflection of competencies each student feels are important to acquire at his/her stage of development. The Summer Institute provides an opportunity for students to interact with nationally known leaders and persons on topics of mutual interest. The synthesis paper provides an opportunity (1) to review the student's original statement about specific topics she/he wanted to study, (2) to list and to analyze significant concepts and implications drawn from the required and elective components and the Summer Institute, and (3) to synthesize the learning experiences to form a new conceptual framework.

A summary of estimated time spent by students on various tasks for the P-HRD seminar is displayed in FIGURE 2. A summary of estimated time spent by students on various tasks for the E-VTO seminar is displayed in FIGURE 3. Of greatest significance were learning outcomes. Five students combined the two

elective units in E-VTO and wrote about the school of the future, the college of the future, the technical school of the future, life-long learning, and partnerships between business and vocational education. Three students obtained credit for prior learning experience that had a focus on computers in nursing, futuring, and special needs students.

All students indicated a high degree of satisfaction with the new format, the content and learning activities of P-HRD and E-VTO, and their increment of personal and professional development.

FIGURE 2

SUMMARY OF TIME ON TASK FOR P-HRD SPECIALIZATION SEMINAR

	Students								<u>Range</u>	<u>M</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>		
1. Hours spent reviewing Overview, Study Guide, and Synthesis Paper Guide.										
	4	1	2	2	2	3	6	4	1-6	3.0
2. Hours spent preparing required Unit I.										
	6	6	25	10	8	18	9	14	6-25	12.0
3. Hours spent preparing required Unit II.										
	5	10	20	11	12	16	12	10	5-20	12.0
4. Hours spent preparing required Unit III.										
	5	12	15	11	15	18	16	10	5-18	12.8
5. Hours spent preparing the first elective Unit.										
	7	8	10	12	12	10	16	14	7-16	11.2
6. Hours spent preparing the second elective Unit.										
	5	10	10	7	12	15	10	12	5-15	9.5
7. Hours spent analyzing required and elective units.										
	3	2	1	1	10	6	4	1	1-10	3.5
8. Hours spent attending sessions and analyzing summer institute sessions.										
	40	20	35	70	48	34	42	33	20-70	40.3
9. Hours spent in specialization seminar sessions at summer institute.										
	9	7	10	36	18	6	7	28	6-36	15.2
10. Hours spent in synthesizing and writing the synthesis paper.										
	<u>20</u>	<u>30</u>	<u>15</u>	<u>10</u>	<u>24</u>	<u>100</u>	<u>16</u>	<u>12</u>	10-100	<u>28.4</u>
Total	104	106	143	170	161	226	138	138		148.0

FIGURE 3

SUMMARY OF TIME ON TASK FOR E-VTO SPECIALIZATION SEMINAR

	Students																
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>	<u>Range</u>	<u>M</u>
1. Hours spent reviewing the Overview, Study Guide, Synthesis Paper.																	
	2	5	1.5	2	6	2	6	8	3	10	4	6	8	10	3	1.5-10	5.1
2. Hours spent in developing the learning contract.																	
	4	2	1	2	10	3	3	2	1	5	4	4	15	10	5	1-15	4.6
3. Hours spent completing 1st required unit.																	
	7	10	12	18	15	10	6	13	9	25	14	32	20	20	15	6-32	15.1
4. Hours spent completing 2nd required unit.																	
	11	8	12	22	10	10	6	11	12	25	9	22	30	20	15	6-30	14.7
5. Hours spent completing 3rd required unit.																	
	6	15	16	20	18	15	6	14	15	25	11	30	25	15	15	6-30	16.4
6. Hours spent completing 1st elective unit.																	
	20	10	22	20	12	30	19	15	10	40	11	36	20	20	20	10-40	20.2
7. Hours spent completing 2nd elective unit.																	
	12			15	19			5*	14	40	8		30	2*	2*	2-40	12.2
8. Hours spent analyzing 3 required and 2 elective units.																	
	2	2	2	4	6	.5	2	5	1	10	7	6	8	8	3	.5-10	4.3
9. Hours spent analyzing summer institute.																	
	7	10	52	15	10	2	2	5	8	24	6	14	20	6	8	2-52	12.2
10. Hours spent writing synthesis paper.																	
	18	20	40	16	20	20	10	40	38	53	20	10	12	30	7	7-53	23.3
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	77	94	159	134	126	93	60	118	111	257	94	160	188	141	91		128

* Credit for life experience

FOOTNOTES

- ¹ See Levern L. Cunningham and Thomas W. Payzant, Understandings, Attitudes, Skills and Symbols: Leadership In The Future (Columbus, OH: The University Council for Educational Administration, 1983).
- ² For example, the Harvard University Graduate School of Education annually conducts the Institute for Educational Management.
- ³ David A. Kolb, Irwin M. Rubin, and James M. McIntyre, Organization Psychology, an Experiential Approach (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1971).
- ⁴ E. Paul Torrance, Cecil R. Reynolds, Theodore Riegel, and Orlow Ball, "Your Style of Learning and Thinking," The Gifted Child Quarterly, (Winter, 1977), Vol. XXI, No. 4.